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Spring 9-18-2018

Web 2.0 & Public Health

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Shah, Ubaid Ullah, "Web 2.0 & Public Health" (2018). *Library Philosophy and Practice (e-journal)*. 2030.
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Web 2.0 & Public Health

Abstract

Purpose: *The purpose of the study is to know the awareness, usage, and impact of web 2.0 tools on the health of general public.*

Design/methodology/approach: *Questioners were prepared and distributed among the departments under applied sciences of the University of Kashmir. Simple random sampling technique was employed.*

Findings: *Although people are well aware of the term Web and Web 2.0 tools but least are these tools used for health purposes like self-diagnosis, self-medication, online doctor consultation etc. The study also reveals that usage of Web 2.0 tools helps in reducing the mental stress in common public.*

Practical implications: *Health of general public can be improved by making them aware & showing them how to use web 2.0 tools for health purposes, we can make them familiar with online doctor consultation, buying medicine online at cheap costs, sharing of health details on web assuring them confidentiality of their health details.*

Originality/value: *The study investigates the awareness, usage & impact of web 2.0 tools on the health of general public. Such study has not been conducted before in the vicinity of University of Kashmir, India.*

Keywords: *Web 2.0, Online doctor consultation, Facebook, Twitter, Netmeds, PatientslikeMe.com.*

Paper Type: *Research paper*

Introduction

The internet and growing web technology have changed the way people interact, communicate, share and acquire knowledge & information. However, when the web was created it had not features and facilities for users to interact and was known as web 1.0 **(Thanuskodi, 2010).** Web 1.0 was almost all about commerce; it had no user participation, no feedback process etc. Latter Darcy DiNucci developed the term Web 2.0 in 1999, and this version of the web came to be known as the web of people. Web 2.0 is about the architecture of participation which encourages user contribution, make it easy to reuse and remix the content, focus on customer self-service and finally create a feeling of belonging to a community (**Barsky & Purdon, 2006**). Some common examples of web 2.0 include blogs, wikis, wikipedia, podcasts, mash-ups and social networking sites etc. The label 'Web 2.0' implies an updated and improved version of the web and has been popularized since it was used at a new media conference in 2004 by "Tim O Relly". Since then it has become the subject of much hype and media attention, resulting in attempts to generate variations such as Health 2.0, Med 2.0, Edu2.0, and so forth (**Hardey, 2008**). Web 2.0 has intervened in the public health sector, with its main aim to guard and enhance the health of public through the promotion and propagation of healthy lifestyles, disease prevention, detection and control of out breaking viral infections. Overall, it is concerned with making the life style of people more hygienic and healthy **(Cdcfoundation).** The creation of social media provides new methods for sharing and disclosing health-related information **(Rutsaert *et al*., 2013).** Suler (2004) specifies that people would state and do things on the web that they would not normally say and do in the face-to-face world. They loosen up, feel less stressed, and express

themselves more openly **(as cited in Lin *et al*., 2016).** Social media is changing the way of healthcare interaction between individuals and health promoting agencies. It brings new dimensions to health care as it offers a medium to be used by the public, patients, and health professionals to communicate about health issues with the possibility of slowly but surely improving health outcomes (**Moorhead *et al.,* 2013**). Many health-related groups exist on "*Facebook"* and "*MySpace"* and a variety of health topics are covered, from preventing AIDS to diabetes to colon cancer. The aim of some groups is entirely to spread awareness among users (**Hanson, Thackeray, Barnes, Neiger & McIntyre, 2008**). As early as 2005, more than one-quarter of Internet users in the United States dealing with a major illness or medical problem said that the internet played a crucial or important role in their decision making **(Horrigan & Rainie, 2006).** Kahn (2008) specifies patients rely on the Internet more frequently than their physicians as a source of healthcare information, and emerging social media websites play an increasing role in online health searches**(as cited in Vance, Howe & Dellavalle, 2009).** Fox *et al* (2013) specify, when there is a lack of sufficient information from traditional medical professionals, as a result, suspicions arise, online media thereby provide individuals with an opportunity for further information seeking and sharing so as to evaluate, verify or even challenge the prescriptions **(as cited in Lin, Zhang, Song & Omori, 2016).** Moreover, users can search or browse information through interactive maps. It is easy for them to locate a practitioner/doctor or service nearby with the help of tags on maps e.g. through *Google maps;* they can access further details about a particular individual or service through online maps **(Hardey, 2008).** The use of web 2.0 for self-diagnosis & self-medication has both advantages as well as disadvantages, it can affect the health of a person positively as well as negatively depending upon the user and the knowledge he possesses regarding his illness and various tools of web 2.0.Therefore using web 2.0 tools for health purposes under the supervision of a knowledgeable individual or an expert usually a doctor is advised to avoid the harms related to it.

Purpose /Objectives

The purpose/objective of the study is to find out:

- The awareness of the term web 2.0 & its tools.
- Usage of web 2.0 tools for health purposes like self-medication, self-diagnosis, online doctor consultation, locating a doctor etc.
- Impact of web 2.0 tools on the heath of common Public.

Methodology

For carrying out the study, 141 questioners were distributed among the students and scholars affiliated with "Faculty of Applied Sciences", University of Kashmir. Simple random sampling technique was employed. Out of 141 questionnaires distributed, only 138 were received.

Review of Literature

Since the term web, 2.0 was used in the new media conference 2004, it has become subject of much hype and media attention, resulting in attempts to generate variations such as Health 2.0, Med 2.0, Edu2.0, and so forth (**Hardey, 2008**). Nowadays web 2.0 trends have extended to the healthcare arena, as those seeking health information began disseminating their experiences and knowledge online. One of the core findings reveals that 61 percent of American adults seek health information online, and 37 percent have accessed user-generated health information online. 60 percent of patients reported that online inquiries had an impact on their health decisions. 42 percent of all adults say that they or someone they know has been helped by following medical advice or health information found on the Internet **(Scanfeld, Scanfeld & Larson, 2010)**. It is estimated that 60–80 percent of American adults look online for health information, including comments, ratings, or reviews provided by patients and consumers themselves **(Horrigan & Rainie, 2006).** The use of online social networking (SN) sites has become increasingly dominant. People generate and share content through wikis; they discuss and debate ideas through blogs **(Colineau & Paris, 2010)**. Shirky (2008) specifies, patients, who used to talk about their health face-to-face to their physician, are now organizing themselves in groups, sharing observations and helping each other manage their condition (often a chronic condition) **(Colineau & Paris, 2010).**Social media is changing the nature and speed of healthcare interaction between individuals and health organizations (**Moorhead *et al.,* 2013**). Social networking sites such as *PatientsLikeMe.com* may provide psychosocial support to patients, help them feel understood, and help them learn how to cope with their illness **(Lo & Parham, 2010).**According to a survey conducted, out of 1323 participants, 72% (952 of 1323) rated the site PatientsLikeMe.com "moderately" or "very helpful." 57% patients also found the site helpful for understanding the side effects of their treatments. Nearly half of patients 42% agreed that the site had helped them to find another patient who has helped them understand what it was like to take a specific treatment for their condition **(Wicks *et al.,* 2010)**.Similarly, a study was conducted on the patients diagnosed with epilepsy. Out of 221 patients, 30% did not know anyone else with the same disease (epilepsy) with whom they could talk, prior to using the PatientsLikeMe and gain a better understanding of seizures and learning more about treatments **(Wicks *et al.,* 2012)**. The public is using web 2.0 tools in more than one way to benefit their health with fewer efforts and in an economical manner. Various studies conducted show the patients prefer to buy medicine online rather than in the traditional way, with convenience and cost-effectiveness being the main factor/reason. Rowland (2005) specifies that the online sales of medicines seem to prosper. In 2004, 17.4 million Americans have visited online pharmacies **(as cited in Gurau, 2005)**. Kerner (2005) specifies, a study conducted by "*ComScore Networks*" reported that the main advantage sought by online buyers is price – nearly two-thirds of respondents used online pharmacies to save money **(as cited by Gurau, 2005)**. Customer satisfaction with online prescription drug buying is high. A study conducted by eMarketer (2004) indicated that only 10 percent of the respondents felt less satisfied with buying their

drugs online than through a traditional pharmacy, 32 percent were more satisfied with the experience, and 56 percent were equally satisfied **(Gurau, 2005)**.Not only this, a study conducted in the U.S from 2000 to 2002 on 720 individuals shows that using the Internet to communicate with friends and family was associated with declines in depression **(Bessière, Pressman, Kiesler & Kraut, 2010)**. Powell *et al.*(2003) specify, With the increasing availability of specialist knowledge, patients have become much more involved in healthcare decision making, sometimes challenging diagnostics, medications or prescriptions, which in turn shifted the balance of power between patients and medical professionals as cited in **(Colineau & Paris, 2010).** This shift of power to patients has its perks & disadvantages as well. Self Diagnosis & Self Medication by patients involve many risks. Potential risks of self-medication practices include incorrect self-diagnosis, delays in seeking medical advice when needed, infrequent but severe adverse reactions, dangerous drug interactions, an incorrect manner of administration, incorrect dosage, incorrect choice of therapy, masking of a severe disease and risk of dependence and abuse **(Ruiz, 2010).** Halamka, et al.(2008) specify, patients may suffer psychosocial harms if they directly access web 2.0 test results that reveal a serious diagnosis, rather than learning the diagnosis through a physician as cited by **(Lo & Parham, 2010)**. What patients should do is that appraise the reliability of websites they visit and of information they obtain. In many situations, patients will benefit from asking their physician for help in evaluating Internet health information. Used appropriately, Web 2.0 interventions can promote the autonomy of patients by making them more informed, more confident in making decisions about their healthcare, and more willing to play an active role in health decisions. Ultimately this may lead to decisions that are more congruent with their deeply held preferences and values **(Lo & Parham, 2010).**

Findings

WEB 2.0 awareness & usage.

74.36% are aware of the term "web 2.0" while as 25.36% are not aware. About 81.15% respondents use *"Whatsapp"* followed by *"Facebook"*. Approximately 41.3% of respondents make use of *"Twitter"*. Some other tools like Instagram (22 respondents), "*Hike"* (11 respondents), "*LinkedIn*" (6 respondents), "*Skype"* (1), "*Viber"* (1) etc are also used. 37.68% make use of Blogs and 57.97% use Wikis. 4 respondents make use of tools like "*Pinterest"* (2), "*Tumbler"* (1) and "*News event* "(1).

Joining any health community, group or page, subscription to health alerts & making health-related posts.

60.14% have not joined any health community, page or group while 39.86% have joined a page, community or a group. 71.73% do not subscribe to health alerts while 28.26% subscribe to it. 66.6% respondents make health-related posts rarely, while 27.53% don't make any Health related post and 5.80% make the posts on daily basis.

Knowledge, usage & frequency of visiting medical websites.

55.07% of the respondents are unaware of any medical website while 44.92 % have an awareness of the same. 20.28% respondents use websites related to health. 6.52% respondents visit the medical website on the daily basis while 43.47% visit occasionally, 21.73% claim to visit rarely and 28.26% never visit any medical website.

Percentage use of web 2.0 for self treatment & tools used for same.

56.52% respondents make use of the web for self-treatment while 43.47% respondents do not use it. 17.39% respondents use medical Blogs while 37.68% respondents use medical websites and 55.07% respondents use social networking sites (Facebook, Twitter etc).

Online doctor consultation and online medicine buying.

7.25% respondents have consulted a doctor online while 92.70% claim to have never consulted a doctor online. 10.87% respondents claim to have purchased medicine online while 89.13% have never purchased medicine online.

Knowhow of any medicine or drug selling website.

15.94% respondents are aware of medicine or drug selling websites (These websites include "*Netmeds"*, "*Healthkart", "1mg", "Cipla"* etc) with 84.06% having no knowledge about the same.

First-hand consultation, method of choosing and means of locating a doctor.

62.32% respondents like to consult Doctor first, 20.28% consult Internet, 15.22% consult pharmacist while 2.17% prefer to consult parents first. It is evident that 88.40% of respondents choose a doctor by means of public opinion while 11.6% use the internet to choose a doctor. 33.3% claim to use *Google Maps* or any other Web 2.0 tool to locate a doctor, hospital or a clinic while 92 66.6% never make use of it.

OTC (Over the Counter Medication) or the internet.

52.9% of respondents use and prefer OTC over the Online Doctor Consultation (47.10 %).

The Extent to which web is playing role in awareness of epidemic diseases & conveying emergency needs of patients.

57.97% respondents believe that web plays an average role in awareness of the epidemic disease, while 27.53% claim it to play a great role and 14.50% respondents are of the view that web plays a poor role in doing so. To convey the emergency needs of the patient 36.9% respondents use web 2.0 tools while 63.04% doesn't.

Role of web 2.0 in improving public health & reducing mental stress.

67.39% respondents are of the opinion that, web 2.0 tools help in improving public health while 32.60% are of the opinion that it does not. Those who are of the opinion that web 2.0 tools reduce the mental stress form 65.21 % (90 respondents) while 34.78% oppose the view.

Making common public more aware about web 2.0.

89.13% respondents are of the view that measures should be taken to make common public more aware of web 2.0 and its impact on public health with 10.8 % opposing the view.

Discussion

- Majority of people are well are about the term web 2.0 and they make use of various web 2.0 tools like Whatsapp, Facebook, Twitter etc. In spite of being well aware of web 2.0 & its tools, a large number of people have not joined any health-related community, page or group neither do they subscribe to health alerts nor make any health-related post. In contrast as per the study conducted by **Horrigan and Rainie (2006),** *the* majority of American adults look for health information online, they make use of reviews, comments & ratings given by other patients with same illness or suffering. Further, the study conducted by **Colineau and Paris (2010)** shows social media is becoming more popular among masses day by day; blogs are being created to discuss ideas related to different subjects including health.
- Web 2.0 tools are mainly used for recreational purposes, rather than promoting health issues but their use for recreational purposes help in reducing mental stress. The study conducted by **Bessière, Pressman, Kiesler, and Kraut (2010)** also support the findings as they are also of the opinion that usage of web 2.0 tools for connecting with family and friends result in declines in the mental depression.
- Majority of people prefer to use web 2.0 for self-medication, before consulting doctors. **Kahn (2008)** also states that patients rely on the Internet more frequently than their physicians as a source of healthcare information, and emerging social media websites play an increasing role in online health searches.
- Findings reveal that very less people have knowledge of a drug-selling website and a minority purchase medicine online. In contrast, the study conducted by **Rowland (2005)** reveals that the demand for online medicines is increasing enormously with cost effectiveness being the primary factor. People in the U.S prefer to buy medicine online than through traditional means because it is cheap and often available without prescriptions.
- An average number of people believe that web 2.0 plays an important role in spreading awareness about the epidemic disease. **Hanson, Thackeray, Barnes, Neiger and McIntyre (2008)** also find that many groups exist on *Facebook* and *MySpace* which cover a variety of health topics. The aim of some groups is entirely to spread awareness about diseases among users. In contrast, a study conducted by **Van Velsen, Van Gemert-Pijnen, Beaujean, Wentzel and Van Steenbergen (2012)** reveals that during an outbreak of infectious disease, social media (like Facebook and Twitter) is not seen as suitable or reliable source for communicating information, but primarily viewed it as a tool for day to day interaction with family and friends.

Conclusion

A large number of people are well aware of the term web 2.0 and its tools like *Facebook, Whatsapp, Twitter* etc. These tools are mainly used for socializing with family and friends, communicating daily affairs of life etc but least are these tools used for communicating health information or spreading health-related awareness among the masses. The main reason behind which seems to be the unawareness in general public regarding how these tools can be used for benefitting public health while those who are aware do not see web 2.0 and its tools as a reliable source for sharing their personal health information. Mainly people see web 2.0 tools as a source of entertainment only, they are well aware of the tools like *Facebook, Twitter, Whatsapp* but they are unaware or are less aware of the sites like *PatientsLikeMe*, where they can interact with a number of patients suffering from same illness and accordingly benefit from their experience and consult a doctor after reading comments and reviews given about him by the patients (**PatientsLikeMe**). In addition to this website like *Netmeds, 1mg, Cipla* etc can be used to purchase medicine online at very cheap rates than through traditional means. Further, a good number of people believe that web 2.0 can play an important role in checking the spread of an epidemic disease as it has a large user base and a number of people can be made aware or can be updated within a less span of time. At last, it can be concluded that web 2.0 is a vast ocean of tools & techniques, which common public is not aware of completely thus a proper awareness & guidance is needed to be given so that the public can reap maximum benefits from web 2.0 in relation to their health.

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